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The merits and feasibility of returning to a commodity standard

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ABSTRACT

Although few academic economists today endorse a gold standard, historical data show that actual gold standards have outperformed actual fiat standards in at least five respects. Gold standards have exhibited: (1) lower mean inflation rate, hence lower deadweight cost of economizing on money balances; (2) lower price level uncertainty, hence deeper long-term bond markets; (3) greater international trade and capital flows, due to network benefits of a common currency area; (4) lower resource costs of gold mining for monetary purposes with a lower real price of gold, due to the absence of private demand to hold gold as an inflation hedge; and (5) greater fiscal discipline. Returning to a gold standard would be immediately feasible for the US, the Eurozone, and Switzerland, where official gold stocks are large enough at the current price of gold to provide historically reasonable reserve ratios behind broader monetary aggregates. Other major nations (Japan, UK, China) would have to purchase gold.

1. Introduction: Few academic economists today endorse a gold standard

The merits of a commodity standard are considerable, judging by the superior historical track record of gold and silver standards to that of fiat standards on the whole. Conspicuously few economists today accept this judgment, however, or even consider the idea of returning to a gold.standard to be a serious contender.

That the gold standard is a minority taste can be seen clearly in January 2012 polling results among participants in the Chicago Booth IGM Forum's "Economic Experts Panel." A panel of 38 economics faculty from 7 top US departments (7 faculty from Harvard, 6 from Yale, 6 from Stanford, 5 from MIT, 5 from Berkeley, 5 from Chicago, and 4 from Princeton) were asked whether they strongly agreed, agreed, were uncertain, disagreed, or strongly disagreed with the following statement:

> If the US replaced its discretionary monetary policy regime with a gold standard, defining a "dollar" as a specific number of ounces of gold, the price-stability and employment outcomes would be better for the average American.

The results: Strongly Agree 0%, Agree 0%, Uncertain 0%, Disagree 40%, Strongly Disagree 53% (the missing 7% were those 3 of 41 who did not respond). Weighted by each respondent's reported confidence, the results tip even further to 66% Strongly Disagree and 34% Disagree.[1]

Respondents were invited to add their own remarks, and some of those who chose Strongly Disagree made remarks that are hard to reconcile with the historical record. For example, Anil Kashyap of the University of Chicago declared: "A gold standard regime would be a disaster for any large advanced economy. Love of the G.S. implies macroeconomic illiteracy." Austan Goolsbee of Chicago suggested that a gold standard is beyond the pale of respectable policy discussion, commenting merely: "eesh. Has it come to this?" Darrel Duffie and Robert Hall, both of Stanford, dismissed a gold standard regime based on observations about gold's highly volatile purchasing power. These observations must have been drawn from the post-1971 period in which gold was demonetized. When observations on gold are drawn from historical gold standard regimes (as shown below), and observations on fiat money are drawn from fiat regimes, a unit of gold exhibits *less* volatile purchasing power than a unit of fiat money.

Only two respondents had favorable things to say about the gold standard (although both nonetheless voted "Disagree"). Daron Acemolglu of MIT commented: "A gold standard would have avoided the policy mistakes of the 2000s, but still likely that discretionary

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[1] IGM Economic Experts Panel, 2012. <http://www.igmchicago.org/igm-economic-experts-panel/poll-results?SurveyID=SV_cw1nNUYOXSAKwrq> (accessed 16.02.14).

policy is useful during recessions." Edward Lazear of Stanford commented: "The gold standard adds credibility when a country lacks discipline. The cost is monetary policy flexibility. The tradeoff is unclear in US."

It should be noted, although no member of the panel made this point in his or her comments, that even a supporter of the gold standard could and probably should disagree with the poll statement taken with literal strictness. The case for a gold standard rests in part on the proposition that price stability outcomes would be better. But there is no first-order reason to believe that "employment outcomes would be better" in the sense of the unemployment rate being lower, because that would require the long-run Phillips Curve to be upward-sloping rather than vertical. The poll statement, as written, asserts that *both* "price-stability and employment outcomes would be better."

Little is new in the historical evidence or theoretical analysis assembled in the following sections of this paper. It is hoped that the assembly may nonetheless offer something new to those present-day economists who (to judge from the IGM Forum survey and other published statements) underappreciate the track record and theoretical properties of commodity standards.

2. The generic definition of a commodity standard

First, a conceptual clarification of the subject matter is in order. Arthur J. Rolnick and Warren E. Weber have provided a useful generic definition of a commodity standard:

> By a *monetary standard*, we mean the objects that serve as the unit of account and that back the objects that circulate as generally accepted means of payment (that is, the objects that back the objects that are money). Under a *commodity standard*, the unit of account is a fixed amount of the commodity. Government currency consists of coins made of the commodity and notes redeemable in the commodity; private monies, such as bank notes, are also redeemable in the commodity.[2]

To put this in the technical terms that other economists have used, and to specify gold as the commodity, under a gold standard gold serves as the *medium of account* or numeraire, with some specified amount of gold serving as the *unit of account*. The everyday units of money issued by financial institutions (most familiarly, demandable debt in the form of banknotes and transferable account balances) are *meaningfully denominated* in the gold unit of account (kept at a fixed par value) by those financial institutions standing ready to pay out gold as their *medium of redemption*. They do so because, reflecting the network economies of a unit of account, each issuer does better business when its product conforms to the established gold unit. To be ready to pay out gold they must of course hold gold reserves.

To define any other commodity standard, substitute the name of the commodity (or combination of commodities) for gold in the above sentences.

Note that nothing about a central bank's or Treasury's policy is essential to this generic definition. A central bank need not exist to have a gold standard in the generic sense. Gold-standard nations without central banks were common in the nineteenth century, including the United States, Canada, Switzerland, Australia, New Zealand, and others. Where a central bank or a Treasury does issue money under a gold standard, it too denominates its liabilities in a gold unit, keeps the denomination meaningful by redeeming, and holds gold reserves in order to be ready to redeem.

3. A commodity standard has several important merits

The following enumeration of the merits of a commodity standard focuses on gold and silver standards, the commodity standards for which the most historical evidence exists.

3.1. Lower mean inflation rate (and expected inflation rate)

The most widely recognized virtue of the historical gold standard is its low average inflation rate. The evidence is straightforward. The longest episode of continuous adherence to the gold standard was the 93 years between the United Kingdom's resumption of the gold standard in 1821 and its departure in 1914. Using the composite price index series compiled by O'Donoghue, Goulding, and Allen, the starting price index was 10.3 (Jan. 1974 = 100) and the ending index 9.8. Over the period as a whole, the corresponding compound annual inflation rate was −0.5%.[3] For the United States, the CPI was 9.67 (1982–1984 = 100) when the gold standard was resumed in 1879, and 9.60 in 1913, the last year before the suspension of the international gold standard in the First World War (and before the Federal Reserve System opened its doors), for a compound annual inflation rate of −0.03%.[4]

More comprehensive evidence is provided by Rolnick and Weber, who compute inflation rates for 15 countries while they were under commodity standards (silver, gold, or bimetallic), and while they were under fiat standards. They measure inflation over each episode, from the start of a monetary standard to its end. They find that under commodity standards the geometric mean inflation rate across episodes was 1.75%, while under fiat standards the mean inflation rate was 9.17 (excluding the one hyperinflation in the sample). Every country in the sample had higher inflation under fiat money.[5]

Stability in the purchasing power of gold is not accidental but the result of inbuilt stock-flow supply-and-demand dynamics. In textbook fashion,[6] determination of the purchasing power of the gold dollar (denoted pp$) can be understood by beginning with the simple identity

$$\text{pp\$} = R\,\text{bundles}/\$ = (S\,\text{bundles}/1\,\text{oz. Au})(T\,\text{oz. Au}/\$).$$

where "$" is the gold unit of account, "bundles" are price-index bundles of goods and services, and "oz. Au" is Troy ounces of 24-carat gold. The ratio "*R* bundles/$" measures the market purchasing

[2] Rolnick, A.J., Weber, W.E., 1997. Money, inflation, and output under fiat and commodity standards. J. Polit. Econ. 105, 1310.

[3] O'Donoghue, J., Goulding, L., Allen, G., 2004. "Consumer Price Inflation since 1750," Office for National Statistics [UK]. Econ. Trends 604, 38–46.

[4] Johnston, L., Williamson, S.H., 2014. "The Annual Consumer Price Index for the United States, 1774–2013,ẄeasuringWorth, 2014. <http://www.measuringworth.com/uscpi/> The 1914 CPI was 9.69, so ending the sample there would give an inflation rate even closer to zero. As measured by the GDP deflator, the compound annual inflation rate was +0.6%; Johnston and Williamson, "What Was the U.S. GDP Then?,ẄeasuringWorth, 2014, <http://www.measuringworth.org/usgdp/> (retrieved 7.05.14). All compound rates calculated by the present author.

[5] Rolnick, A.J., Weber, W.E., 1997. Money, inflation, and output under fiat and commodity standards. J. Polit. Econ. 105, 1310. In the earliest (1994) working-paper version of their study, commodity standards produced −0.5% inflation on average, while fiat standards – excluding the German hyperinflation from the sample – produced 6.5% inflation. In a later working paper, presumably with a different sample of episodes, the numbers were 1.0% and 13%. Rolnick and Weber, "Inflation and Money Growth Under Alternative Monetary Standards,Ṙesearch Department Working Paper No. 528, Federal Reserve Bank of Minneapolis (1994); and idem, "Inflation, money, and output under alternative monetary standards," Research Department Staff Report 175, Federal Reserve Bank of Minneapolis (1995).

[6] White, L.H., 1999. The Theory of Monetary Institutions. Basil Blackwell, Oxford (Chapter 2).